

Draft Section 404(b)(1) Evaluation Report*

***FAP 310 (U.S. 67)**

Between Jacksonville and Macomb

Morgan, Cass, Schuyler, and McDonough Counties, Illinois

Purpose of this Evaluation

The proposed improvements to U.S. 67 would involve placement of dredged or fill materials into waters of the United States. Discharges of dredged or fill material into such waters are regulated under Section 404 of the Clean Water Act.

Under Section 404(b) of the Act, proposed discharges of dredged or fill material must conform to guidelines developed by the U.S. Environmental Protection Agency. On September 5, 1975, the Environmental Protection Agency published regulations (40 CFR 230) which outline criteria and procedures for evaluating activities subject to Section 404. On December 24, 1980, revised Section 404(b)(1) guidelines were published, and became effective on March 30, 1981. It is mandatory that the guidelines be applied to all proposed discharges of dredged and fill material subject to approval under Section 404. This evaluation will address proposed discharges of dredged and fill material for the construction of the bridge over the Illinois River and the reconstruction of existing U.S. 67 proposed by the Illinois Department of Transportation.

A Statewide Implementation Agreement (SIA) is in effect that provides for concurrent NEPA and Section 404 processes on Federal-aid highway projects in Illinois. The purpose of the SIA is to ensure appropriate consideration of the concerns of the Corps of Engineers, the U.S. Environmental Protection Agency, and the U.S. Fish and Wildlife Service, especially regarding compliance with the Section 404(b)(1) guidelines. The Illinois Department of Transportation is required by the SIA to prepare this draft Section 404(b)(1) evaluation.

Project Description

A. Location

The proposed U.S. 67 improvement (Alternative E) extends about 90 kilometers (61 miles) from the Jacksonville West Bypass north to U.S. 136 near Macomb (see Figure 1-1 in Section 1). The proposed improvement would require crossings for 10 designated 100-year floodplains, including a 21-km (13-mi) longitudinal encroachment for the Illinois River floodplain that extends from the intersection of IL 104 to a point just south of Beardstown. Cover types within the project area were identified using modified terminology for the IDNR Natural Area Classification System and the U.S. Fish and Wildlife Service Classification System for the Habitat Evaluation Procedure. Eighty-six percent of the project area is comprised of agricultural land. Other cover types within the

project area include forbland/non-native grassland (5.5 percent), urban/developed land (2.0 percent), shrubland (2.0 percent), and others (4.5 percent).

B. Alternatives Considered

Two build-alternatives were considered in the environmental document process: Alternative A and Alternative E. Both alternatives share a common alignment from Macomb to Beardstown. South of Beardstown, Alternative E would be generally aligned along the existing U.S. 67 corridor, whereas, Alternative A would follow a new route to the east (generally following the Burlington Northern-Santa Fe Railroad tracks). A comparison of the two alternatives show that Alternative E would require less new right-of-way; impact less farmland, and; impact less wetlands, natural areas, and threatened and endangered species. Based on these findings and others, the Illinois Department of Transportation identified Alternative E as the preferred alternative.

C. General Description

1. Area Subject to Section 404 Jurisdiction

Potential waters of the United States that occur within the project area include 18 surface water bodies (Table M-1) and 30 wetland sites. Of the 18 surface water bodies, eight are located in the La Moine River drainage basin, six in the Central Illinois River drainage basin, and four in the Lower Illinois River drainage basin.

TABLE M-1
Surface Water Body Crossings

Water Resource ^a	Existing Structure (Yes/No) ^b	New Structure Type	Adjacent Lands Highly Erodible? ^c
Lower Illinois River Drainage Basin			
Mauvaise Terre Creek	Yes	Bridge	Yes
Coon Run	Yes	Bridge	No
Willow Creek	Yes	Bridge	No
Indian Creek	Yes	Bridge	No
Central Illinois River Drainage Basin			
Illinois River	Yes	Bridge	No
Curry Lake	Yes	Bridge	No
Coal Creek Ditch	Yes	Culvert	No
Bluff Ditch	Yes	Bridge	No
East Fork Crane Creek	Yes	Culvert	No
Schuy-Rush Lake	Yes	Bridge	Yes
La Moine River Drainage Basin			
Town Branch	No	Culvert	No
Ryan Branch	No	Culvert	Yes
West Branch of Sugar Creek	Yes	Culvert	No
Horney Branch	No	Culvert	No

TABLE M-1
Surface Water Body Crossings

Water Resource ^a	Existing Structure (Yes/No) ^b	New Structure Type	Adjacent Lands Highly Erodible? ^c
Carter Creek	Yes	Culvert	Yes
Grindstone Creek	No	Bridge	No
Camp Creek	Yes	Bridge	No
Troublesome Creek	Yes	Bridge	No

^a There are two crossings of fingers of the Beardstown Marsh; both would be crossed on bridges

^b New crossing nearby to existing crossing

^c Highly erodible - slopes are 5-10 percent or greater

Areas identified as wetlands were done using the Corps of Engineers Wetland Delineation Manual (1987) and exhibit positive evidence of wetland soils, wetland vegetation, and wetland hydrology. Thirty wetland sites totaling 136.7 hectares (337.7 acres) occur in the project area.

2. Proposed Project Features – Recommended Alternative

The proposed project (Alignment E) generally follows existing U.S. 67 from east of Chapin to the point south of Beardstown (Drainage Road). The project then bypasses Beardstown, crosses the Illinois River, and generally follows existing U.S. 67 north to Macomb, except for Rushville and Industry bypasses. Grade-separated interchanges are proposed for IL 125, IL 103, U.S. 24, and IL 104. All other crossroads would have at-grade intersections with U.S. 67. Design standards require total reconstruction of existing U.S. 67 to accommodate current geometric design standards, including a wider roadway cross-section, a higher design speed, improved sight distances, and safety conditions. The proposed alignment also varies from the existing alignment in order to avoid residences, natural resources, and cultural resources.

An expressway-type facility was chosen as the most appropriate type for the proposed improvements. The facility would be a 4-lane divided roadway with partial-access control. The typical roadway section would have two travel lanes in each direction separated by a grass median. The typical right-of-way width required for the proposed roadway would be 90 meters (295 feet); typical pavement width would be 7.2 meters (24 feet); and typical median width would be 15 meters (50 feet) consisting of paved shoulders and grassed areas. The typical paved shoulder width would be 3 meters (10 feet) for the right shoulder and 1.8 meters (6 feet) for the left shoulder. Roadside ditches would be provided for drainage as appropriate. The overall right-of-way needs would be slightly greater in hilly terrain where larger roadway cuts or fills are required, as well as in low lying areas where sizable fills are required to raise the highway above flood level.

- a. **New Illinois River Bridge:** The existing U.S. 67 Illinois River bridge would be replaced with a new bridge structure. The new bridge would include 4-lanes with shoulders. At this time, only the bridge location has been determined; other engineering details would be defined in the design phase of the project. The new location would be on the south side of the existing bridge. It is expected that the minimum clear navigation span would be at least as wide as

the existing structure (approximately 183 meters or 600 feet). The existing bridge would remain in service until the completion of the new bridge, at which time it would be demolished.

- b. **Other Structures:** Eleven water bodies would be crossed using simple short-span bridges and seven water bodies would be crossed using culverts (Table M-1). Two bridge structures would also be constructed crossing segments of the Beardstown Marsh (wetland) immediately west of Beardstown.

D. General Description of Dredged or Fill Material

1. General Characteristics of Materials

- a. **Fill Material:** Fill materials include rock (quarry run limestone and crushed stone), concrete, and earthen material (silts and clays).
- b. **Dredged Material:** Dredged material is defined as material that is either dredged or excavated from waters of the United States. Earthen material consisting of alluvial silts and clays would be excavated from some sites.

2. Quantity of Material

Quantities of rock, crushed stone, concrete, dredged and fill material would be determined in the design phase of the project.

3. Source of Material

Stone used for the project would be obtained from commercial stone quarries in the vicinity of the project area. Concrete will be obtained commercially. Earthen material would be obtained in the vicinity of the project area.

E. Description of the Proposed Discharge Sites

1. Illinois River, Curry Lake, and adjacent wetlands

The Illinois River and adjacent waters would be affected by the construction of a new bridge and the demolition of the existing bridge at the Illinois River crossing near Beardstown. The construction phase of the new bridge would require in-stream piers, abutments, and embankments. The bridge would crossover Curry Lake, an island between Curry Lake and the Illinois River, and the Illinois River. The overall length of the bridge is 1200 meters (3937 feet), with 350 meters (1148 feet) crossing Curry Lake, 250 meters (820 feet) crossing the island, and 600 meters (1969 feet) crossing the Illinois River. The bridge would be 30 meters (98 feet) wide and would be supported by 16 piers. During this phase of work, the bridge design for the Illinois River crossing was not undertaken. The quantities presented in this discussion are estimates that assume the pier placement for the new bridge would be same as the existing bridge.

The area of disturbance for each of the elements that would be placed in the waters of the U.S. or adjacent wetlands is discussed below. The bridge piers would occupy a total area of 0.16 ha (0.40 ac) in Curry Lake, 0.05 ha (0.12 ac) on the island (forested wetlands), 0.06 ha (0.15 ac) in the Illinois River, and 0.09 ha (0.22

ac) on the south bank (forested wetlands). Thus, the total in stream and adjacent wetland impact is 0.36 ha (0.89 ac).

The proposed highway improvement would extend for 27 kilometers (16.8 miles) through the Illinois River floodplain as either a longitudinal or transverse encroachment. Throughout the entire floodplain area, the roadway would be placed on fill to an elevation of one meter (3.28 feet) above the 100-year flood level. The area of fill placed in the floodplain would be 250 ha (617.8 ac). Although, the amount of fill is large, it is not expected to have any significant impact on the natural or beneficial floodplain values, nor have any significant change in flood risk. Therefore, it is determined that this encroachment is not significant.

The sources of fill for the proposed highway improvement have not been determined. However, several sources have been discussed including sites proximate to the project, bottom sediments from Meredosia Lake, and materials dredged from the Illinois River. Both, the locations of borrow sites and the quality of potential fill material, need to be assessed further.

The project construction in the Illinois River and Curry Lake would have the potential for erosion and sedimentation. Scour around piers can alter stream bottom characteristics. Implementation of strict erosion control measures and other construction techniques would minimize erosion and sedimentation to the extent practicable. These measures would include cofferdams and sheet piling for pier and abutment construction; replacement rip-rap at abutments, exposed streambanks, and piers; silt fencing; seeding of disturbed bank areas; and other temporary and permanent erosion control devices.

The method of demolition for the existing bridge has not been determined. The actual method will be defined in later phases of project development. Due to environmental concerns regarding water quality of the river, a combination of measures would likely be used:

- Protective shielding could be used during deck removal to prevent debris from falling to the area beneath the bridge.
- The truss span demolition could be accomplished by “floating out” the spans on barges with the deck cut out and removed in sections. This would require barges with scaffolding systems to be floated in so supports could be jacked into place during the dismantling of the trusses.
- Girders could be field cut at designated locations for stability during demolition and lifted out individually or as a section.
- A temporary trestle could be constructed adjacent to the existing structure. Dismantling and removal of the deck and girders could then be accomplished from the trestle.

Substructures would generally be removed to at least 0.3 meter (1 foot) below the proposed ground line. Cofferdams, like those used for pier construction, could be used to access the existing piers and to minimize disturbance to the river bottom.

2. Schuy-Rush Lake

The proposed highway improvement would cross over Schuy-Rush Lake at its eastern most extremity. The highway would cross the waters of the lake on two dual bridges measuring 80 meters (263 feet) in length, and each being 13 meters (42.7 feet) wide. The bridges would span the waters of the lake on a single span; therefore, no piers would be placed in the water. Fills on both sides of the bridges would extend through adjacent wetland areas (i.e. 75 meters (246 feet) on the northside of the bridges, and 150 meters (492 feet) on the southside). The total area of the fill would be 0.34 ha (0.84 ac). The new bridge structures would have no significant impact to the flood profile in the area.

3. Mauvaise Terre

The new highway improvements would crossover Mauvaise Creek in the same location as the existing highway. This alignment would greatly minimize impacts to water resource and adjacent wetlands. The highway would cross the creek on dual bridges at this location measuring 110 meters (361 feet) long, and each being 13 meters (42.7 feet) wide. Existing fill supporting the approaches to the bridge would be expanded, and would displace an adjacent wetland area totaling about 0.45 ha (1.11 ac).

4. Beardstown Marsh

During the roadway planning process, care has been taken to minimize impact to the Beardstown Marsh. The alignment, however, does come into contact with the marsh in two locations (i.e. drainage canal, and a narrow finger of marsh extending to the west). Approximately 0.64 ha (1.57 ac) of wetland will be impacted at this location. For both of these locations, added care was taken to lessen impact by carrying the roadway over these sensitive areas on bridge structures. The use of these structures, thereby, avoids the use of fill in the marsh. The structure crossing over the drainage canal would measure 100 meters (328 feet) long and 35 meters (115 feet) wide, and would be a single span requiring no piers in adjacent wetland areas. The structure crossing over the narrow finger of marsh would be a dual bridge and would measure 180 meters (591 feet) in length, and each bridge structure would be 13 meters (42.7 feet) wide.

5. Other Surface Water Bodies

In addition to the Illinois River, Curry Lake, Mauvaise Terre Creek, Schuy-Rush Lake, and Beardstown Marsh, the improvements to U.S. 67 would require crossings at 14 other surface water bodies. Thirteen of these crossings would occur at locations nearby to existing U.S. 67 structures (bridges/culverts) and would involve replacing or extending existing structures. Crossing streams requires in-stream work that may cause an increase in turbidity and sedimentation, and temporarily alter downstream hydraulics and substrate conditions. Any long-term increases in suspended sediments can reduce aquatic productivity by limiting photosynthesis, lowering oxygen levels, and covering food sources and fish spawning areas. In-stream bridge and culvert construction creates localized, permanent changes in habitat. However, habitat is generally impacted only in small areas and these impacts may be relatively minor when the entire stream

reach is considered. Additionally, fourteen of the stream crossings required for expansion of U.S. 67 would occur at locations with existing structures (Table M-1), further minimizing impacts to stream habitat.

The surrounding soils at four water bodies have been classified as highly erodible lands (Table M-1). Potential impacts to these water resources would be minimized using proper construction and erosion techniques. Construction in or near waterways would be performed using erosion control devices that are installed before erosion prone construction activities begin. Construction at stream crossings would be conducted during low or normal flow periods. Temporary and permanent erosion control methods may include silt fences, retention basins, detention ponds, interceptor ditches, seeding and sodding, rip-rap of exposed embankments, erosion mats, and mulching. The application of these mitigation measures would reduce the effects of turbidity and sedimentation upon streams and creeks to minor short-term levels.

6. Wetlands

Construction impacts would result in the loss of wetlands from the placement of fill during construction. Approximately 13.0 ha (32.1 ac) of wetland from 30 sites will be directly lost. These wetlands include 7.2 ha (17.6 ac) of PEM wetland, 5.3 ha (13.2 ac) of PFO1 wetland, 0.1 ha (0.2 ac) of PUB wetland, and 0.4 ha (1.0 ac) of other wetland types.

Factual Determinations

A. Physical Substrate Determinations

1. Substrate Elevation and Slope

The topography in the project corridor includes level to gently rolling uplands, deeply dissected uplands closer to the Illinois River bluff, steep bluff areas adjacent to the river valley, and the level, wide floodplain of the Illinois River. Elevations range from 210 meters (690 feet) mean sea level (MSL) north of the river to 131 meters (430 feet) MSL in the Illinois River valley. The tributary streams throughout the project area are generally deeply incised and have steep valley walls.

2. Sediment Type

Six major soil profiles occur within the project corridor. Two are associated with the uplands, one with bluffs adjacent to the Illinois River valley, and three with the river valley bottoms.

Upland soil profiles in the project corridor include the Ipava-Tama-Sable and Hickory-Rozetta-Elco associations. The Ipava-Tama-Sable Association consists of nearly level to moderately sloping soils that are poorly to moderately well-drained. These soils are used mainly for cultivated crops grown in the area, such as corn and soybeans. Erosion is a hazard in the gently sloping and moderately sloping areas, and wetness is a limitation in the nearly level areas. The Hickory-Rozetta-Elco Association consists of gently sloping to very steep soils that are

moderately well to well-drained, formed in loess or glacial till. This soil type is also used for cultivated crops, as well as pasture or woodland. Erosion and soil stability is a problem with the soils in this association.

The bluffs area soil profiles consist of the Fayette-Sylvan-Bold Association. This association consists of gently sloping to steep soils that are well drained, formed in loess. The Fayette and Sylvan soils are well-suited for woodlands. Erosion and soil stability is a problem with the soils in this association.

The river valley bottoms soil profiles include the Worthen-Littleton Association, Bloomfield-Plainfield-Alvin Association, and the Plainfield-Sparta Association. The Worthen-Littleton Association consists of nearly level to moderately sloping soils that are on foot slopes and alluvial fans, and is well-drained to somewhat poorly drained. This association is well-suited to cultivated crops. The Bloomfield-Plainfield-Alvin Association consists of soils that are gently sloping to steep, excessively well-drained, sandy and loamy soils that formed in wind-deposited sandy and loamy material. In the less sloping areas, the soils in this association are used mainly for cultivated crops, but in the more sloping areas, they are used for woodland or pastureland. The Plainfield-Sparta Association consists of gently sloping to strongly sloping, excessively drained, sandy soils that formed in wind- and water-deposited sands. The soils in this association are used mainly for cultivated crops, and in some areas, woodlands.

3. Dredged/Fill Material Movement

Earthen material used for embankment and as backfill will be compacted. Earthen material used for embankment is subject to erosion but will be stabilized through the use of re-vegetation measures.

4. Physical Effects on Benthos

Benthos are found only in the aquatic portions of the project area (Table M-1). Construction of the roadway (structures and fills) would result in the burial and loss of some benthic organisms. However, these areas would be recolonized after construction, possibly with different assemblages of benthic organisms.

5. Other Effects

No other effects are expected.

6. Actions Taken to Minimize Impacts

The primary actions taken to avoid adverse effects on the substrate are using structures, designing stable embankment slopes, minimizing the amount of right-of-way required, and revegetation measures to minimize erosion. The use of appropriate sedimentation and erosion controls during construction would reduce any long-term adverse impacts. The Illinois Department of Transportation *Joint Design/Construction Procedure Memorandum on Erosion and Sediment Control* and *Standard Specifications for Road and Bridge Construction* would be implemented at construction sites.

B. Water Circulation, Fluctuation, and Salinity Determinations

1. Water

a. Salinity

Not Applicable.

b. Water Chemistry

The proposed action would have a temporary and insignificant effect on water quality in the project area.

c. Clarity

Elevated suspended sediment levels are expected to occur in a localized nature during bridge and culvert construction, particularly in Curry Lake. Decreased water clarity is expected to be short-term at these sites.

d. Color

No change is expected.

e. Odor

The project is not expected to have an impact on water odors.

f. Taste

The project is not expected to impact water taste.

g. Dissolved Gas Levels

Construction activities associated with the project will have no significant adverse impact on dissolved gas levels.

h. Nutrients

Some nutrients may be released to the water column during bridge and culvert construction, and the placement of fill material; however, this would represent a temporary increase and is not considered significant.

i. Eutrophication

The project is not expected to contribute toward eutrophication of the water column.

j. Water Temperature

Temperatures are not expected to change.

2. Current Patterns and Circulation

a. Current Patterns and Flow

Overall, the project will not alter circulation or the patterns of flow.

b. Velocity

The project is not expected to cause any increase in current velocity for any surface water bodies.

c. Stratification

Stratification does not occur within the project area because of shallow depths or strong currents.

d. Hydrologic Regime

New bridge, culvert, drainage structures, and roadway fill would result in an insignificant change in the waterbodies capacity to carry flood water, causing a minimal increase in flood heights and flood limits. These minimal increases will not result in any significant adverse impacts on the natural and beneficial floodplain values. Thus, they will not result in any significant change in flood risks or damage.

3. Normal Water Level Fluctuations

The project would not affect normal fluctuations in any of the surface water bodies.

4. Salinity Gradients

Not applicable.

5. Actions Taken to Minimize Impacts

The construction of bridges and culverts for surface water body crossings and other drainage structures minimize the effect of the project on flood heights. The project is not expected to have short- or long-term impacts on water circulation or fluctuation.

C. Suspended Particulate/Turbidity Determination

1. Expected Changes in Suspended Particulate and Turbidity Level in Vicinity of Disposal Site

Increases in suspended particulates and turbidity due to construction of the Illinois River bridge are expected to be minimal because cofferdams will confine the construction sites, and the area within the cofferdams would be dewatered during the construction process. Work in and around other surface water body crossings would have short-term, localized increases in suspended particulates and turbidity due to in-stream construction and fill placement.

2. Effects (degree and duration) on Chemical and Physical Properties of the Water Column

a. Light Penetration

No significant changes in light penetration are expected to occur.

b. Dissolved Oxygen

No significant changes in dissolved oxygen are expected to occur.

c. Toxic Metals and Organics

Toxic metals and organics are not expected to be an issue in any of the proposed areas of construction.

d. Pathogens

There is no reason to believe any pathogens exist in any of the proposed areas of construction.

e. Aesthetics

Short periods of increased levels of suspended particulates and turbidity could be aesthetically unpleasant to the public who live or commute through the project area during construction.

f. Water Temperature

No significant changes in water temperatures are expected to occur.

3. Effects on Biota

a. Primary Production, Photosynthesis

Minor short-term impacts to primary production and photosynthetic processes are expected to occur locally during construction.

b. Suspension/Filter Feeders

A localized, short-term and minor reduction in benthos production due to increased suspended sediments is possible for all surface water body crossings.

c. Sight Feeders

Impacts to sight-feeders are expected to be short-term and slight.

4. Actions Taken to Minimize Impacts

Actions taken to minimize impacts associated with suspended particulates and turbidity include the use of erosion control.

D. Contaminant Determinations

The Illinois River, Grindstone Creek, Troublesome Creek, and Mauvaise Terre Creek are known to display elevated levels of Cadmium, Chromium, Copper, Lead, Mercury, Zinc, and organics within some reaches of these streams. None of the stream crossings within the project area are known to contain contaminated sediments. Dredge material (sand) from the Illinois River is being considered at Beardstown. This material, if used, will come from the Corps of Engineers disposal site at Beardstown. This material has been determined not to be contaminated.

E. Aquatic Ecosystem and Organism Determinations

1. Effects on Plankton

No adverse impacts are expected.

2. Effects on Benthos

Benthic organisms in the immediate vicinity of open-water sites designated for the placement of earthen material probably would be lost due to burial. These losses could occur at any of the crossings; however, the most notable permanent displacement would occur in the Illinois River, Curry Lake, Schuy-Rush Lake, and Mauvaise Terre Creek. Loss of benthos would occur as a result of pier construction in the Illinois River, and Curry Lake. The loss in habitat for the se water bodies is estimated to be 0.36 ha (0.89 ac) including the adjacent wetland area. A localized, short-term and minor reduction in benthos production due to increased suspended sediments is also possible, particularly during the demolition of the existing bridge structure.

Highway improvements at Schuy-Rush Lake would affect the tail water of the lake. The expansion of the existing roadway embankments would encroach (approximately 0.20 ha to 0.34 ha or 0.49 ac to 0.84 ac) upon these tail waters. This area is expected to support some benthic organisms.

Highway improvements at Mauvaise-Terre Creek would not directly affect the waterway. Adjacent construction activities, however, could increase suspended sediments to the creek resulting in a short-term and minor reduction in benthos production.

Overall, the impact upon benthic organism at the four locations mentioned above are expected to be minor and not significant to the aquatic ecology of the area water bodies.

3. Effects on Nekton

Free swimming organisms (fish) would avoid the area during the period of construction activity.

4. Effects on Aquatic Food Web

The proposed action would not cause or establish the proliferation of any undesirable competitive species that may usurp resident species. Construction activities may temporarily disrupt the aquatic food chain to a minor degree.

5. Effects on Special Aquatic Sites

a. Sanctuaries and Refuges

There are no sanctuaries or refuges in the project area.

b. Wetlands

A total of approximately 13.0 ha (32.1 acres) of wetland from 30 sites would be directly lost. Based on the Illinois Interagency Wetland Policy Act of 1989, the implementing rules of 1996, and the Illinois DOT Wetlands Action Plan, wetland compensation totaling approximately 56.7 ha (140.0 acres) is required. Wetland mitigation is proposed at the LaGrange Wetland Bank. The site is located in the northeast corner of Brown County, Illinois, and is currently

under development. The property is approximately 666 hectares (1,645 acres) in size and under Illinois Department of Transportation ownership. The site is located approximately 4.8 kilometers (3 miles) southwest of Beardstown. The LaMoine River forms the sites northern boundary and the Illinois River forms its eastern boundary.

c. Mud Flats

There are no mud flats in the project area.

d. Vegetated Shallows

There are no vegetated shallows in the project area.

e. Coral Reefs

Not applicable.

f. Riffle and Pool Complexes

Riffle and pool complexes may be impacted, but only small areas are generally impacted. These impacts may be relatively minor when the entire stream reach is considered. Many of the stream crossings required for expansion of U.S. 67 would occur at locations with existing structures, further minimizing impacts to stream habitat.

6. Threatened and Endangered Species

A Biological Assessment/Detailed Action Report was prepared for the U.S. 67 project in accordance with Section 7 of the U.S. Endangered Species Act. Three federal listed species occur in the area; bald eagle, Indiana bat, and the decurrent false aster. It was determined that neither the bald eagle nor the Indiana bat or their habitat would be impacted by the proposed project. The decurrent false aster could potentially be impacted by the proposed highway improvements in the vicinity of the Beardstown Marsh area. The decurrent false aster does have a tendency to appear at different locations on an annual basis. Therefore, before construction would commence in the Beardstown Marsh area, a survey would be conducted for the species.

Both the Illinois Department of Natural Resources (IDNR) and the U.S. Fish and Wildlife Service (USFWS) reviewed the Biological Assessment/Detailed Action Report. The USFWS offered no additional comments pertaining to threatened and endangered species based on their review. The IDNR offered several comments concerning impact to special habitat (i.e. INAI sites). Among these included further efforts by the IDOT to avoid direct impact. If such avoidance in not possible, the IDNR has requested compensation in the form of funding special management techniques that would enhance the habitat at a site near the project.

7. Other Wildlife

Potential impacts to wildlife species may consist of loss of habitat, disruption of animal movement patterns, and mortality associated with vehicle/wildlife collisions. The proposed highway improvement would result in the loss or conversion of several cover types that support various wildlife species. The most

notable wildlife habitat affected by the project would be the Illinois River and associated floodplains, Mauvaise Terre Creek, Beardstown Marsh, and Schuy-Rush Lake. Vegetative cover type present in these locations and others include shrubland, emergent wetland, pond, sand pond, Loess hill prairie, and sand prairie. The emergent wetlands and shrubland are the most dominant cover types impacted by the proposed action, approximately 7 ha and 2 ha (17 acres and 5 acres) respectively. Overall, this impact represents less than 0.1 percent of the project area. Wildlife impacts would mostly occur to those relatively common species, including the whitetail deer, raccoon, Virginia opossum, gray squirrel, skunk, several waterfowl species, and a variety of songbirds. Potential impacts to these wildlife species are minimized as the proposed alignment generally follows the existing U.S. 67 alignment.

8. Actions to Minimize Impacts

Actions that will minimize impacts to the aquatic ecosystem and its organisms include the following. The amount of right-of-way required would be minimized and the use of structures to span a number of aquatic areas has been incorporated into the project design. Unavoidable impacts to threatened and endangered species and wetlands will be mitigated. A NPDES Construction Permit and erosion and sediment control plans are required. Construction engineers would oversee the construction to ensure that personnel, equipment, and construction techniques meet all contract specifications, including environmental requirements.

F. Proposed Disposal Site Determinations

1. Mixing Zone Determinations

The discharges of fill and dredged material will largely occur in upland areas. Discharges in aquatic areas are limited to earthen material used for fill at surface water body and wetland crossings. It is suspected that the concentration of re-suspended material associated with construction in the Illinois River would not be high enough to require a mixing zone.

2. Determination of Compliance with Applicable Water Quality Standards

The project is expected to comply with all applicable water quality standards. The Illinois Environmental Protection Agency (IEPA) recommendations will be incorporated into the proposed project. A request for Section 401 water quality certification from the IEPA will be done at the end of the design phase.

3. Potential Effects on Human Characteristics

a. Municipal and Private Water Supply

Currently, the Illinois Environmental Protection Agency (IEPA) has not designated any sole-source aquifers in Illinois as defined by Section 1424(e) of the Safe Drinking Water Act. Therefore, the proposed project would not affect any such aquifers.

Twenty-nine private wells are within 61 meters (200 feet) of the project right-of-way. However, no IDOT support facilities (e.g., for salt storage) exist or are planned

for this project; therefore, no impact should be expected on the 122-meter (400-foot) setback zone for public wells or on the 61-meter (20-foot) setback zone for private wells as determined by the IEPA Division of Public Water Supplies (PESA 1997).

b. Recreational and Commercial Fisheries

The proposed project will have no impact on the recreational and commercial fisheries of the Illinois River.

c. Water Related Recreation

The project will have no impact on boating or other water related recreation.

d. Aesthetics

Construction activity will impact the aesthetic quality of the project area during the duration of the work. The most visible activity will occur adjacent to the Illinois River (bridge construction).

e. Parks, National and Historic Monuments, National Seashores, Wilderness Areas, Research Sites, and Similar Places

The proposed highway improvement would require some additional right-of-way from Schuy-Rush Park and Schuy-Rush Lake. In the mid 1960's, the City of Rushville purchased 153 hectares (375 acres) for the purpose of using some of the land to impound water. In an ordinance, the city set apart certain lands for recreation. Presently, the park includes a 91-hectare (225-acre) reservoir, and 60 hectares (150 acres) of surrounding land. The reservoir is used for small boating and fishing. A recreational area, comprised of a boat launch, picnicking area, and campground, covers about 8 hectares (20 acres). The recreation area is located about 1,220 meters (4,000 feet) west of U.S. 67. The remaining properties are undeveloped, and the city has indicated no further plan for expanded recreational uses. Generally, casual or dispersed recreational uses do not occur on the remaining undeveloped properties.

The proposed highway improvement would cross Schuy-Rush Lake at the upper end of the reservoir. The reservoir extends to the east of the highway under an existing highway bridge. The reservoir to the east of the highway is unusable for boating because of shallow water conditions. Additionally, the surrounding lands are undeveloped and rarely used for dispersed recreational activities.

The proposed highway improvement would cross Schuy-Rush on dual bridges in the same general location as the existing bridge. The new bridges would measure about 80 meters (250 feet) in length, and would each be 13 meters (40 feet) wide. The existing highway fill on either side of the proposed new bridges would be extended to the east to support the new roadway improvement, requiring about 0.04 hectare (1 acre) of the reservoir area.

G. Determination of Cumulative Effects on the Aquatic Ecosystem

The proposed project should not have an adverse impact on the aquatic system. There are no other projects within the IDOT program in this area, nor other major developments known or expected. Wetland losses have been minimized through the

design process, and unavoidable losses of wetlands are being replaced at a nearby mitigation site. Replacement and management of these wetland resources should insure their long-term viability.

H. Determination of Secondary Effects on the Aquatic Ecosystem

No adverse secondary impacts to surface water bodies or wetlands have been identified.

Findings of Compliance or Non-Compliance with the Restrictions on Discharge

A. Adaptation of the Section 404(b)(1) Guidelines to this Evaluation

In our evaluation of discharges proposed in connection with the project, the Environmental Protection Agency's Section 404(b)(1) Guidelines of December 24, 1980 were applied without significant adaptation.

B. Evaluation of Availability of Practicable Alternatives to the Proposed Discharge Site Which Would Have Less Adverse Impact on the Aquatic Ecosystem

The waters of the United States occupy about 1.8 percent of the U.S. 67 project area. Recognizing the presence of these resources, the proposed roadway alignment has been shifted as much as possible to avoid impacts to aquatic ecosystems. The recommended alternative has the least adverse impact on the aquatic ecosystem.

C. Compliance with Applicable State Water Quality Standards

Water quality certification under Section 401 of the Clean Water Act has not been issued yet, but is anticipated.

D. Compliance with Applicable Toxic Effluent Standard or Prohibition Under Section 307 of the Clean Water Act

The proposed action would not violate the toxic effluent standards of Section 307 of the Clean Water Act.

E. Compliance with Endangered Species Act of 1973

A Biological Assessment/Detailed Action Report was prepared for the U.S. 67 project in accordance with Section 7 of the U.S. Endangered Species Act.

The U.S. Fish and Wildlife Service (USFWS) reviewed the Biological Assessment/Detailed Action Report and had no comments. The project is in compliance with the Endangered Species Act.

F. Compliance with Specified Protection Measures for Marine Sanctuaries Designated by the Marine Protection, Research, and Sanctuaries Act of 1972

Not applicable.

G. Findings of Significant Degradation of the Waters of the United States

The proposed project would not result in significant adverse effects on human health and welfare, including municipal and private water supplies, recreation and commercial fishing, plankton, fish, shellfish, wildlife, and special aquatic sites. The life stages of aquatic life and other wildlife would not be adversely affected in a significant manner. Significant adverse effects on aquatic ecosystem diversity, productivity and stability, and recreational, aesthetic and economic values would not occur.

H. Appropriate and Practicable Steps Taken to Minimize Potential Adverse Impacts of the Discharge on the Aquatic Ecosystem

All appropriate and practicable measures have been taken through application of procedures contained in Subpart H of the Guidelines to insure minimal adverse effects of the proposed discharges.

I. On the Basis of the Guidelines the Proposed Disposal Sites for the Discharge of Dredged and Fill Materials

Based on this evaluation, the proposed work is specified as complying with the requirements of these guidelines with the inclusion of appropriate and practicable conditions to minimize pollution or adverse effects to the aquatic ecosystem.